Solar energy generation

2723. PROF. P.J. KURIEN: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the amount of solar energy generated and the approximate cost of its generation per unit;

(b) whether solar energy is commercially viable, if so, the details thereof and if not, the reasons therefor; and

(c) whether Government is supporting any research for bringing down the cost of generation, if so, the details thereof and results achieved?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) About 7.7 lakh solar lanterns, 5.1 lakh solar home lighting systems, 82,500 solar street lighting systems, 7247 solar water pumping systems, stand-alone & grid connected solar photovoltaic (SPV) power plants of about 10 MW peak aggregate capacity, about 3.12 million square meter solar water heater collector area and 6.57 lakh solar cookers have been distributed / installed in the country, as on 30.11.2009, under the solar energy programmes. The present cost of electricity generation from solar thermal and solar photovoltaic energy systems is Rs.13.45 and Rs.18.44 per unit respectively, as fixed by Central Electricity Regulatory Commission.

(b) and (c) Solar energy systems are presently not commercially viable due to their high initial costs. Therefore, the Ministry has been providing various fiscal and financial incentives for promotion of such systems. These incentives include capital and interest subsidies. The Ministry is also supporting research & development in this sector through academic institutions, research organizations and industry, to improve the efficiency, increase the life and reduce the costs of such systems. As a result of research and development efforts and volume production, the costs of solar energy systems are declining gradually.

Potential of solar and wind energy

†2724. SHRI LALIT KISHORE CHATURVEDI: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) the potential of wind energy, solar energy and tidal wave energy, state-wise and service-wise;

(b) the potential of wind and solar energy exploited and being generated in Rajasthan;

(c) the cost to be incurred thereon and contribution of the State and the Central Government thereto;

(d) the potential proposed to be utilized in the State during the next five years; and

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†Original notice of the question was received in Hindi.

(e) the provision of funding therefor?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) A potential for wind power generation of around 48,000 MW has been estimated in the country, in areas having minimum wind power density of 200 watts per square meter and assuming land availability of 1% in such potential areas. The potential for solar energy is estimated for most parts of the country at around 20 MW per square kilometer of open, shadow free area covered with solar collectors. Potential for tidal wave energy is estimated at around 7000 MW, mainly in the Gulf of Kutch and Cambay and in Sundarbans.

(b) A power generation capacity of around 850 MW from wind energy has been installed in Rajasthan as on 31.10.2009. The same is expected to generate about 1.2 billion units of electricity per annum. Two grid connected solar power plants of 150 kWp capacity are installed in Rajasthan. The estimated annual electricity generation from these plants is about 0.25 million units.

(c) The wind power projects have been set up and are owned by the private sector and therefore there is no direct contribution from Central or State Government except the applicable fiscal incentives. The SPY systems have been set up and are owned by the State Agency Rajasthan Renewable Energy Corporation Limited (RRECL) with Central Financial Assistance to the tune of Rs.2.5 crore.

(d) State-wise targets for exploitation of the available potential are not set by the Ministry.

(e) Investments on the renewable power projects are be made mainly by the private developers to whom the project sites are allotted by the State Government. The Central Government is facilitating the setting up of such projects through Generation Based Incentives apart from the applicable Fiscal incentives. In addition attractive tariff regimes are being offered by State utilities.

Solar charged invertors

2725. SHRIMATI SYEDA ANWARA TAIMUR:
SHRI VIJAY JAWAHARLAL DARDA:
Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether solar-charged inverters have been developed by an organization "Solar Indian Solutions" and this scheme has been successful in Andhra Pradesh;

(b) if so, whether incentives are being given to such users to buy solar inverters that work both on solar and traditional energy; and

(c) whether Government would launch such a pilot scheme in Vidarbha region where shortage of electricity has immensely impacted the crop productivity forcing farmers to resort suicides during the last five years?

THE MINISTER OF NEW AND RENEWABLE ENERGY (DR. FAROOQ ABDULLAH): (a) to (c) No, Sir. The Non-Conventional Energy Development Corporation of Andhra Pradesh Limited